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14 FINJAN, INC.

10 **IN THE UNITED STATES DISTRICT COURT**
11 **FOR THE NORTHERN DISTRICT OF CALIFORNIA**
12 **SAN FRANCISCO DIVISION**

14 FINJAN, INC.,

15 Plaintiff,

16 v.

17 PROOFPOINT, INC. and ARMORIZE
18 TECHNOLOGIES, INC.,

19 Defendants.

Case No.: 5:13-cv-05808-HSG

**DECLARATION OF NENAD
MEDVIDOVIĆ IN SUPPORT OF
FINJAN'S OPENING CLAIM
CONSTRUCTION BRIEF**

Date: June 24, 2015
Time: 10:00 AM
Courtroom: Courtroom 15, 18th Floor
Judge: Hon. Haywood S. Gilliam, Jr.

1 I, Nenad Medvidović, declare:

2 1. I make this Declaration based upon my own personal knowledge, information, and
3 belief, and I would and could competently testify to the matters set forth herein if called upon to do so.

4 **Qualifications**

5 2. I received a Bachelor of Science (“BS”) degree, Summa Cum Laude, from Arizona
6 State University’s Computer Science and Engineering department.

7 3. I received a Master of Science (“MS”) degree from the University of California at
8 Irvine’s Information and Computer Science department.

9 4. I received a Doctor of Philosophy (“PhD”) degree from the University of California at
10 Irvine’s Information and Computer Science department. My dissertation was entitled, “Architecture-
11 Based Specification-Time Software Evolution.”

12 5. I am employed by the University of Southern California (“USC”) as a faculty member
13 in the Computer Science Department, and have been since January 1999. I currently hold the title of
14 Professor with tenure. Between January 2009 and January 2013, I served as the Director of the Center
15 for Systems and Software Engineering at USC. Since July 2011, I have served as my Department’s
16 Associate Chair for PhD Affairs.

17 6. I am very familiar with and have substantial expertise in the area of software systems
18 development / software engineering, software architecture, software design, and distributed systems.

19 7. I have over twenty years of research experience that has spanned a wide range of issues
20 pertaining to large, complex, distributed software systems. This research has included security and
21 trust as significant components. As one example, my research has resulted in a new technique that
22 deploys a software system on a set of distributed computers in a manner that optimizes that system’s
23 “non-functional” characteristics, including efficiency, scalability, resource consumption, reliability, as
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1 well as security. As another example, motivated by the frequent vulnerability of distributed systems to
2 malicious adversaries, I have developed, published, and eventually patented a novel technique for
3 ensuring system security and data privacy in open computer networks. I have co-authored a widely
4 adopted textbook on software system architectures, in which several chapters deal with the issue of
5 security and one entire chapter is specifically dedicated to security and trust.

6 **Materials Reviewed**

7
8 8. I have reviewed in detail U.S. Patent Nos. 6,154,844 (“the ‘844 Patent”); 7,058,822
9 (“the ‘822 Patent”); 7,613,918 (“the ‘918 Patent”); 7,647,633 (“the ‘633 Patent”); 7,975,305 (“the ‘305
10 Patent”); 8,079,086 (“the ‘086 Patent”); 8,141,154 (“the ‘154 Patent”); and 8,225,408 (“the ‘408
11 Patent”); (collectively “Finjan Patents”). Declaration of James Hannah in Support of Finjan’s Opening
12 Claim Construction Brief (“Hannah Decl.”) filed herewith, Exs. 1-8. I have also reviewed the
13 prosecution history of the Finjan Patents.

14
15 9. I understand that I am submitting this Declaration to assist the Court in determining the
16 proper construction of certain terms used in the claims in the Finjan Patents. I have reviewed the Joint
17 Claim Construction and Pre-Hearing Statement Pursuant to Patent Local Rule 4-3, which I understand
18 was submitted jointly by Finjan and Defendants and sets forth their respective proposed claim
19 construction and support therefore. I have also reviewed the terms that I understand were selected by
20 Finjan and Defendants for construction.

21 **Construction of the Terms**

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23 10. I have reviewed Finjan’s and Defendants’ proposed constructions for the terms in the
24 claims of the Finjan Patents. Based on my experience, the Finjan Patents and the file histories of the
25 Finjan Patent, my opinion of a person of skill in the art is a person with a bachelor’s degree in
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computer science or related field, and either (1) two or more years of industry experience and/or (2) an advanced degree in computer science or related field.

11. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

a) Construction of the Terms of the '822 Patent and '633 Patent

12. I address the terms for the '822 Patent and '633 Patent together, as the patents are related and share a specification. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan's Proposed Construction	Defendants' Proposed Construction
mobile protection code	code capable of monitoring or intercepting potentially malicious code	code communicated to at least one information-destination that, at runtime, monitors or intercepts actually or potentially malicious code operations
receiving means for receiving, at an information re-communicator, downloadable-information, including executable code	Governed by 35 U.S.C. § 112(6): Function: receiving downloadable information Structure: information re-communicator	Governed by 35 U.S.C. § 112(6): Function: receiving downloadable-information, including executable code Structure: the algorithm disclosed in col. 6, l. 56 – col. 9, l. 62 and Figs 1a-c, 2, 3
mobile code means communicatively coupled to the receiving means for causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination	Governed by 35 U.S.C. § 112(6): Function: causing mobile protection code to be executed by a mobile code executor at	Governed by 35 U.S.C. § 112(6): Function: communicatively coupled to the receiving

	a downloadable- information destination Structure: packaging engine	means, and causing mobile protection code to be executed by a mobile code executor at a downloadable- information destination such that one or more operations of the executable code at the destination, if attempted, will be processed by the mobile protection code Structure: the algorithm disclosed in Figs 7a, 7b and 8, and at col. 17, l. 34 – col. 18, l. 34
information-destination/downloadable- information destination	No construction necessary—Plain and ordinary meaning	a user computer that receives and initiates (or otherwise hosts) execution of the downloadable information

(1) mobile protection code

13. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the term “mobile protection code” in view of the specification of the ‘822 Patent as “code capable of monitoring or intercepting potentially malicious code.” While Mobile Protection Code is not a term typically used in the art, the meaning of the term is described in the ‘822 Patent. Finjan’s proposed construction is correct because it is consistent with the intrinsic record of the ‘822 Patent. For example, the ‘822 Patent states that: “[t]he sandboxed package includes mobile protection code (“MPC”) for causing one or more predetermined malicious operations or operation combinations of a Downloadable to be monitored or otherwise intercepted.” ‘822 Patent, Col. 3, ll. 6-10; ‘633 Patent, Col. 3, ll. 7-11. Finjan’s proposed construction is also accurate in that it requires the intercepting to be of “potentially malicious code,” consistent with the purpose of the mobile protection

1 code for protection and security. *See* ‘822 and ‘633 Patents, Abstract (“Protection systems and
2 methods provide for protecting one or more personal computers (“PCs”) and/or other intermittently or
3 persistently network accessible devices or processes from undesirable or otherwise malicious
4 operations ...”).

5 14. Defendants’ proposed construction of mobile protection code as “code communicated to
6 at least one information-destination that, at runtime, monitors or intercepts actually or potentially
7 malicious code operations” adds additional limitations and misconstrues the term. Defendants’
8 proposed construction adds the limitation that the mobile protection code is “code communicated to at
9 least one information-destination.” This limitation is not is incorrect because Claim 14 of ‘633 Patent
10 does not require mobile protection code to be communicated to a downloadable-information
11 destination. Defendants’ construction would add a new limitation. Thus, a person of ordinary skill in
12 the art would understand that mobile protection code is not necessarily communicated and therefore I
13 disagree with Defendants’ construction.
14

15 15. Furthermore, there is no requirement that “runtime” be added to the construction of the
16 term. Indeed, the specification states that mobile protection code can be created on a separate gateway
17 or computer before any executable is run. ‘822 Patent, Col. 10, ll. 52-54; *id.*, Col. 11, ll. 6-10 (“In
18 accordance with a further aspect of the invention, it is found that improved efficiency can also be
19 achieved by causing the MPC to be executed within a Downloadable-destination in conjunction with,
20 and further, prior to initiation of the detected Downloadable.”); *id.*, Col. 20, ll. 21-32. Furthermore,
21 nothing in the specification or prosecution history indicates that the term was defined in the narrow
22 manner advocated by Defendants.
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(2) receiving means for receiving, at an information re-communicator, downloadable-information, including executable code

16. Based on my professional experience, a person of ordinary skill in the art would understand the function of the term “receiving means for receiving, at an information re-communicator, downloadable-information, including executable code” is “receiving downloadable information” and the structure is “information re-communicator.”

17. I understand that in order to determine the proper function for the claim term, a person of skill in the art must look to the specification to find the structure that performs the function recited in the claim. Based on my professional experience, a person of ordinary skill in the art would understand that claim 28 of the ‘822 Patent discloses that the function of “receiving ... downloadable-information” is performed by the “information re-communicator.” The ‘822 Patent discloses that “[e]mbodiments provide, within one or more ‘servers’ (e.g. firewalls, resources, gateways, email relays or other information re-communicating devices), for receiving downloadable-information....” ‘822 Patent, Col. 5, ll. 34-37 (emphasis added). As shown from the specification and the claim language itself, the structure for receiving downloadable information is an information re-communicator.

18. Defendants’ proposed function has the phrase “including executable code.” That additional phrase is not necessary and in my opinion would not help the fact-finder because it is already stated in the claim.

19. Defendants’ structure is incorrect as well. It is clear from the claim language itself and described above that the “information re-communicator” is the proper structure for “receiving downloadable information.” Indeed, Defendants fail to identify any particular structure. Thus Defendants’ function and structure for this means-plus-function element are incorrect.

(3) mobile code means communicatively coupled to the receiving means for causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination

20. Based on my professional experience, a person of ordinary skill in the art would understand the function of the term “mobile code means communicatively coupled to the receiving means for causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination” is “causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination” and the structure is “packaging engine.”

21. I understand that in order to determine the proper function for the claim term, a person of skill in the art must look to the specification to find the structure that performs the function recited in the claim. Here, the claim language itself informs the structure and function of the means-plus-function term.

...mobile code means communicatively coupled to the receiving means for causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination such that one or more operations of the executable code at the destination, if attempted, will be processed by the mobile protection code,

wherein the causing is accomplished by forming a sandboxed package including the mobile protection code and the downloadable-information, and causing the sandboxed package to be delivered to the downloadable-information destination.

‘822 Patent, Claim 28 at Col. 24, ll. 5-16 (emphasis added).

22. Here the claim language specifies that the “mobile code means” is for “causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination”. Thus the function is “causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination.” As explained in the specification of the ‘822 Patent, the packaging engine is responsible for “causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination” “wherein the causing is accomplished by forming

a sandboxed package” “and causing the sandboxed package to be delivered to the downloadable-information destination”. *See e.g.*, ‘822 Patent at Col. 2, l. 64 to Col. 3, l. 3 (“a packaging engine for causing a sandboxed package...to be sent to a Downloadable-destination.”); *id.*, Col. 12, ll. 48-55 (“Packaging engine 403 provides for generating mobile protection code and protection policies, and for causing delivery thereof (typically with a detected-Downloadable) to a Downloadable-destination... packaging engine 403 includes ...linking engine 405.”) (emphasis added); *id.*, Col. 13, ll. 30-37 (“Linking engine 405 provides for forming from received component elements (see above) a sandboxed package...”) (emphasis added); *id.*, Col. 20, ll. 4-20 (“The FIG. 10*b* flowchart illustrates a method for forming a sandboxed package according to an embodiment of the invention.”); *id.*, Figs. 4, 10B. Thus, the packaging engine both forms the sandbox package and causes it to be delivered to the downloadable-information destination. Therefore, the structure performing the function “causing mobile protection code to be executed by a mobile code executor at a downloadable-information destination” is the “packaging engine.”

23. Defendants’ structure and function are incorrect for this means-plus-function element. Defendants fail to identify a particular structure for performing their identified function. Further, as discussed above, the function is performed by causing the mobile protection code to be sent to the destination. Defendants’ proposed structure citations regard extracting a sandboxed package at a destination computer. *See e.g.*, ‘822 Patent at Col. 17, ll. 31-33; Figs 7a, 7b, and 8. Thus, Defendants’ structure is incorrect because it requires the destination computer to form and send a sandboxed package to itself.

(4) information-destination/downloadable-information destination

24. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the terms “information-destination” and “downloadable-information destination” as these terms used are in the claims of the ‘822 and/or ‘633 Patent and in view of the

‘822 and ‘633 Patent. As such, no construction is necessary for the term. The term is easily understood based on the plain language—a destination for information. Defendants’ proposed construction of “a user computer that receives and initiates (or otherwise hosts) execution of the downloadable information” is unnecessarily limiting and unsupported by the intrinsic record. For example, the specification of the ‘822 Patent states that “[e]mbodiments further provide for causing mobile protection code (“MPC”) and downloadable protection policies to be communicated to, installed and executed within one or more received information destinations in conjunction with a detected-Downloadable.” ‘822 Patent, Col. 5, ll. 44-48. As shown in the specification, information-destination is not limited to a “user computer that receives and initiates (or otherwise hosts) execution of the downloadable information,” and can be any location where the information is communicated to, installed or executed. Furthermore, the ‘822 Patent defines an “information-destination” to include “firewall/server, or other information-suppliers or intermediaries (i.e. as a ‘re-communicator’ or ‘server’).” ‘822 Patent, Col. 7, ll. 46-56. As shown in the specification, the information-destination is not limited to the computer or device that receives and initiates (or otherwise hosts) execution of downloadable-information. As such, the proper construction is plain and ordinary meaning, which would encompass the correct interpretation of an information-destination/downloadable-information destination, without improperly limiting the term to a narrow understanding of a single user computer that receives and initiates (or otherwise hosts) execution of the downloadable information.

b) Construction of the Terms of the ‘086 Patent

25. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan’s Proposed Construction	Defendants’ Proposed Construction
Database	a collection of interrelated data	a structured set of data

	organized according to a database schema to serve one or more applications	
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26. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the term “database” consistently with the commonly understood definition of the term. The readily understood meaning of “database” is “a collection of interrelated data organized according to a database schema to serve one or more applications.” There is nothing in the intrinsic record of the asserted patent which requires a departure from this commonly understood meaning; in fact, this construction describes how the specification uses the term.

27. A person of ordinary skill in the art would understand that the term “database” as used in the ‘086 Patent means “a collection of interrelated data organized according to a database schema to serve one or more application.” A database refers to structured data organized for use and retrieval for other applications. The “database schema” of a database describes how the data stored within the database is organized. For example, the ‘086 Patent states that “[a]ny suitable explicit or referencing list, *database* or other storage structure(s) or storage structure configuration(s) can also be utilized to implement a suitable user/device based protection scheme...or other desired protection *schema*.” ‘086 Patent, Col. 16, ll. 53-57 (emphasis added). A schema allows other applications to use a database to manage, store, retrieve, and access this data. The ‘780 Patent describes this when it states that “[t]he security program 255 operates in conjunction with the security database 240, which includes security policies 305, known Downloadables 307, known Certificates 309 and Downloadable Security Profile (DSP) data 310 corresponding to the known Downloadables 307.” ‘780 Patent, Col. 4, ll. 23-27.¹ The ‘780 Patent further provides that the DSP data 310 stored in the security database 240 is used by other applications, for example, “[i]f the DSP data 310 of the received Downloadable is known, the

¹ The ‘086 Patent incorporates by reference the 6,804,780 Patent (the “‘780 Patent”). Hannah Decl., Ex. 9.

1 code scanner 325 retrieves and forwards the information to the ACL comparator 330.” ‘780 Patent,
2 Col. 5, ll. 48-51. This is just one example of how the ‘086 Patent describes a database that actively
3 uses structured data in a manner for storing and retrieving security profiles for Downloadable that is
4 consistent with the normally understood meaning of the term.

5 28. I disagree with Defendants’ “structured set of data” construction because they have
6 incorrectly equated it to a “log file.” In my opinion, this is not the proper definition of a database and
7 supports the need to construe this term in a manner that is consistent with the definition understood by
8 those of skill in the art. A person of ordinary skill in the art would understand a simple log file is not a
9 database because it is not structured like a database. A database, on the other hand, is a structured
10 software component that allows user and other software components to store and retrieve data in an
11 efficient manner consistent with Finjan’s construction.

13 29. Moreover, the ‘086 Patent distinguishes between a log file and a database
14 demonstrating that they are not the same thing. For example, the ‘086 Patent describes logging results
15 for a human to review in an event log, while the security database is used for storage and access by
16 other component of the system. The ‘086 Patent states that “the logical engine 333 forwards a status
17 report to the record-keeping engine 335, which stores the reports in event log 245 in the data storage
18 device 230 for subsequent review, for example, by the MIS director.” ‘780 Patent, Col. 7, ll. 16-20.
19 This shows that any understanding of database should be distinct from a log file because the patent
20 uses the terms to represent different aspects of the system. Accordingly, to distinguish between a log
21 file and a database, it is my opinion that Finjan’s construction of a database as “a collection of
22 interrelated data organized according to a database schema to serve one or more applications” is
23 appropriate.
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c) *Construction of the Terms of the ‘408 Patent*

30. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan’s Proposed Construction	Defendants’ Proposed Construction
parse tree	a tree data structure representing exploits in scanned content	a set of linked nodes whose nodes represent tokens and patterns in accordance with the parser rules

31. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the terms “parse tree” as it is used in the claims of the ‘408 Patent and in view of the ‘408 Patent as “a tree data structure representing exploits in scanned content.” The ‘408 Patent describes that “parser 220 uses a parse tree data structure to represent scanned content.” ‘408 Patent, Col. 8, ll. 24-25. The ‘408 Patent is also focused on detecting exploits within the parse tree, stating that “generating a parse tree from the identified patterns of tokens, and identifying the presence of potential exploits within the parse tree.” ‘408 Patent, Abstract; *see also id.*, Col. 9, ll. 32-38 (“rules are provided to analyzer 230 for each known exploit” and that “the nodes of the parse tree also include data for analyzer rules that are matched.”). For example, claim 1 of the ‘408 Patent recites that:

...dynamically building, by the computer while said receiving receives the incoming stream, a parse tree whose nodes represent tokens and patterns in accordance with the parser rules;

dynamically detecting, by the computer while said dynamically building builds the parse tree, combinations of nodes in the parse tree which are indicators of potential exploits, based on the analyzer rules; and

indicating, by the computer, the presence of potential exploits within the incoming stream, based on said dynamically detecting.

1 ‘408 Patent, Claim 1 at Col. 19, l. 64 to Col. 20, l. 7 (emphasis added). The description within
 2 the claims and the description of a tree data structure are sufficient for a person of ordinary skill
 3 in the art and is consistent with Finjan’s construction.

4 32. I disagree with Defendants’ proposed construction for this term. Defendants’
 5 construction adds limitations that are unnecessary and contradicted by the intrinsic record. Finjan’s
 6 definition is clear and is how a person of ordinary skill in art would understand a “parse tree.”
 7 Defendants’ construction is ambiguous as to which nodes Defendants’ construction refers to in reciting
 8 the phrase “whose nodes.” It could be one of two options, “a set of linked nodes” or “nodes” itself.
 9

10 33. Further, Defendants’ inclusion of a description of the parse tree “nodes” is unnecessary
 11 and unwarranted when this is already included in the claims itself. *See* Claims 1 and 23. For example,
 12 Defendants add in the limitation that the parse tree “represent tokens and patterns in accordance with
 13 the parser rules.” While Defendants’ construction imports a limitation that exists in claim 1, it does
 14 not exist in other independent claims. For example, claim 23 recites that:
 15

16 ...dynamically building, while said receiving receives the incoming
 17 stream, a parse tree whose nodes represent tokens and rules vis-à-vis the
specific programming language;

18 dynamically detecting, while said dynamically building builds the parse
 19 tree, patterns of nodes in the parse tree which are indicators of potential
exploits, based on said expressing vis-à-vis the specific programming
 20 language; and

21 indicating, by the computer, the presence of potential exploits within the
 22 incoming stream, based on said dynamically detecting.

23 ‘408 Patent, Claim 23 at Col. 22, ll. 15-27 (emphasis added).

24 34. Here, the phrase of “represent tokens and patterns in accordance with the parser rules”
 25 does not exist in the claim language. Indeed, the phrase “parser rules” is not in Claim 23. Instead,
 26 Claim 23 recites a “parse tree whose nodes represent tokens and rules vis-à-vis the specific
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programming language” where the “rules designate certain patterns of tokens as forming grammatical constructs.” Thus, Claim 23 provides a different meaning of the nodes in the parse tree than the parse tree of Claim 1. Indeed, a person of ordinary skill in the art reading the specification would understand that finding potential exploits done via “parser rules” would be using the grammar of the programming language. *See e.g.*, ‘408 Patent, Col. 1, l. 65 to Col. 2, l. 34. In comparison, the “rules” identified in Claim 23 relates to finding potential exploits and not necessarily using the particular grammar of the specific programming language. *See e.g.*, ‘408 Patent, Col. 2, l. 58 to Col. 3, l. 15. Thus, the nodes in the parse tree of Claim 1 and Claim 23 would not necessarily be the same. To import Defendants’ limitation of parse tree in, would in essence, modify the meaning of Claim 23. From reading the specification, the patentee intended the nodes of the parse tree in Claim 1 and Claim 23 to be different. In my opinion, a person of ordinary skill in the art would understand that a “parse tree” as disclosed in the ‘408 Patent is not limited to nodes that “represent tokens and patterns in accordance with the parser rules.”

d) Construction of the Terms of the ‘844 Patent

35. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan’s Proposed Construction	Defendants’ Proposed Construction
linking the first Downloadable security profile to the Downloadable	No construction necessary—Plain and ordinary meaning	creating an association from the Downloadable to the first Downloadable security profile, including using a pointer from the Downloadable to the profile or attaching the profile to the Downloadable
Downloadable [includes / with] a linked [first] Downloadable security profile	No construction necessary—Plain and ordinary meaning	Downloadable [includes / with] an association to a [first] Downloadable

		security profile, including using a pointer from the Downloadable to the profile or attaching the profile to the Downloadable
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36. I have reviewed the constructions provided by Finjan and Defendants and I agree that Finjan's proposed constructions are correct.

37. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the terms "linking the first Downloadable security profile to the Downloadable" and "Downloadable [includes / with] a linked [first] Downloadable security profile" as the terms are used the claims of the '844 Patent and in view of the specification. As such, no construction is necessary for either term.

38. Defendants' proposed construction limits the term only two examples of linking. The '844 Patent states, "the term 'linking' herein will be used to indicate an association between the Downloadable 205 and the DSP 215 (including using a pointer from the Downloadable 195 to the DSP 215, attaching the DSP 215 to the Downloadable 205, etc.)." '844 Patent at Col. 6, ll. 20-24. Thus it is plainly clear by the use of "etc.", the patent specification does not limit "linking" to the two examples provided in the Defendants' construction. Furthermore, a person of ordinary skill in the art would recognize that pointer and attaching are merely examples, and not limitations of the term.

e) Construction of the Terms of the '154 Patent

39. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan's Proposed Construction	Defendants' Proposed Construction
a call to a first function	No construction necessary—Plain and	a call to a function different from the second

	ordinary meaning	function
[invoking / invoke / calling] a second function	No construction necessary—Plain and ordinary meaning	[invoking / invoke / calling] a function different from the first function
content processor (i) for processing content received over a network, the content including a call to a first function, and the call including an input, and (ii) for invoking a second function with the input, only if a security computer indicates that such invocation is safe	No construction necessary—Plain and ordinary meaning	<p>means-plus-function under § 112, ¶ 6</p> <p><u>function</u>: (i) processing content received over a network, the content including a call to a first function, and the call including an input, and (ii) invoking a second function with the input, only if a security computer indicates that such invocation is safe</p> <p><u>structure</u>: the algorithm performed by a web browser running on client computer 210, 410 and described in col. 10, l. 30 – col. 11, l. 4; as well as shown in Fig. 3 (steps 324-335, 384-392) and described in col. 13, l. 63 – col. 14, l. 16 and col. 14, l. 61 – col. 15, l. 3; as well as shown in Fig. 5 (steps 525-540, 585-595) and described in col. 16, ll. 22-32, 62-67</p>

40. I have reviewed the constructions provided by Finjan and Defendants and I agree that Finjan's proposed constructions are correct.

(1) a call to a first function / [invoking / invoke / calling] a second function

41. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the terms “a call to a first function” and “[invoking / invoke / calling] a second function” as the terms are used in the claims of the ‘154 Patent and in view of the ‘154 Patent. As such, no construction is necessary for the term.

42. A function, in the programming sense, typically includes inputs, performs an operation or routine, and provides an output. Functions also can call other functions within the routine. The terms “a call to a first function” and “[invoking / invoke / calling] a second function” involve commonly known terms, especially to a person of ordinary skill in the art. In reviewing the specification and file history, I do not see where the patentee sought to limit or redefine the meaning of the terms. Thus, in my opinion, because the terms are well understood and there is no special meaning ascribed to the terms, the terms should be construed as the plain and ordinary meaning.

43. Defendants’ construction of terms is contrary to the specifications. Indeed, the ‘154 Patent describes a first function, such as “Document.write(‘<h1>hello</h1>’),” and a second function, such as “Document.write(text).” *See e.g.*, ‘154 Patent, Col. 9, l. 13 to Col. 13, l. 3; *id.*, Tables I, II, III. In the example shown in Table III, the second function calls the same first function, “Document.write()”. Under Defendants’ construction, the expressed example embodiment would be left out because the example embodiment uses the same function, Document.write() as the first and second function. Defendants improperly requires the first and second functions to be different. In another example from the specification, the ‘154 Patent describes a recursive function “Document.write(‘<h1>Document.write(‘<h1><SCRIPT>Some JavaScript</SCRIPT></h1>’)</h1>’).” ‘154 Patent, Col. 12, ll. 28-36. A recursive function is a function that calls itself. In this example, a person of ordinary skill in the art would understand that the outer Document.write() function is the first function and the inner Document.write() function is the

1 second function or vice versa. The security computer can inspect both levels to determine whether it is
 2 safe to invoke. ‘154 Patent, Col. 12, l. 43 to Col. 13, l. 7. Thus, Defendants’ construction contradicts
 3 the example embodiments of the ‘154 Patent.

4 **(2) content processor (i) for processing content received over a network, the content**
 5 **including a call to a first function, and the call including an input, and (ii) for**
 6 **invoking a second function with the input, only if a security computer indicates**
 7 **that such invocation is safe**

8 44. Based on my professional experience, a person of ordinary skill in the art would
 9 understand the meaning of the term “content processor (i) for processing content received over a
 10 network, the content including a call to a first function, and the call including an input, and (ii) for
 11 invoking a second function with the input, only if a security computer indicates that such invocation is
 12 safe” as the term is used in Claim 1 of the ‘154 Patent and in view of the ‘154 Patent. As such, no
 13 construction is necessary for the term.

14 45. I understand that Defendants have construed the term to be a means-plus-function
 15 claim. I have been informed that for a claim to be understood to be a means-plus-function claim
 16 without the word “means”, it must be demonstrated that a person of ordinary skill in the art, after
 17 reading the patent and the claim, would conclude that the claim limitation was so devoid of structure
 18 that the patentee intended the claim limitation to be a means-plus-function claim. I disagree with
 19 Defendants. In my opinion, all the terms in the claim term are terms in the common parlance used by
 20 persons of ordinary skill in the art. Indeed, the term “content processor” is described in one example in
 21 the ‘154 Patent as a processor that processes received content. ‘154 Patent, Col. 2, ll. 64-67; *see also*
 22 *id.*, Col. 10, ll. 61-62 (“Content processor may be a web browser running on client computer 210.”).
 23 Further, there is nothing in the specification or file history that would limit the term “content
 24 processor” to a web browser. The meaning of the term “content processor” is evident from the term
 25 itself and the context of the specification, i.e., a processor for processing content.
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46. I disagree that this claim term is a mean-plus-function element. Further, Defendants unnecessarily limit the structure of the content processor to a web browser. In my opinion, there is no clear disavowal of content processor in the specification or the prosecution history. Indeed, the specification shows a content processor on a client computer and merely states that it “may be a web browser running on client computer 210.” ‘154 Patent, Col. 10, ll. 61-62 (emphasis added); *id.*, Figs. 2 and 4. Defendants’ structure for the content processor improperly limits the structure to a web browser based on a single embodiment. Thus Defendants’ construction is incorrect because it is not a means-plus-function element and because Defendants improperly limit the structure of the claim.

f) Construction of the Terms of the ‘305 Patent

47. I understand that Finjan and/or Defendants have disputes regarding the constructions for the claims terms listed below:

Claim Term	Finjan’s Proposed Construction	Defendants’ Proposed Construction
selectively diverting incoming content from its intended destination to said rule-based content scanner	No construction necessary—Plain and ordinary meaning	indefinite

48. Based on my professional experience, a person of ordinary skill in the art would understand the meaning of the term “selectively diverting incoming content from its intended destination to said rule-based content scanner” with reasonable certainty in the context of the Claim 1, the specification, and in light of the prosecution history. As such, no construction is necessary for the term nor is the term indefinite.

49. For example, Claim 1 of the ‘305 Patent recites that:

...a network interface, housed within a computer, for receiving incoming content from the Internet on its destination to an Internet application running on the computer;

... a rule-based content scanner that communicates with said database of parser and analyzer rules, operatively coupled with said network interface,

1 for scanning incoming content received by said network interface to
2 recognize the presence of potential computer exploits therewithin;

3 a network traffic probe, operatively coupled to said network interface and
4 to said rule-based content scanner, for selectively diverting incoming
5 content from its intended destination to said rule-based content scanner;...

6 ‘305 Patent, Claim 1 at Col. 46-66 (emphasis added).

7 50. I understand from the context of the claim that the network traffic probe would
8 selectively divert Internet content from network interface to the rule-base content scanner. A person of
9 ordinary skill in the art would understand the same. In addition, a person of ordinary skill in the art
10 would understand that there would be a mechanism for selectively diverting content to the rule-based
11 content scanner.

12 51. This is supported by the specification of the ‘305 Patent. The ‘305 Patent describes an
13 embodiment where the network traffic probe diverts content initially going from the Internet to the
14 intended destination to a rule-based content scanner. ‘305 Patent, Col. 2, ll. 37-52. In addition, Figure
15 9 of ‘305 Patent shows the network traffic probe selectively diverting content. ‘305 Patent, Fig. 9; *id.*,
16 Col. 19, ll. 35-41 (“Desktop computer 900 preferably includes a network traffic probe 920, which
17 generally passes incoming network traffic to its destination, be it a browser, e-mail client or other
18 Internet application. However, in accordance with a preferred embodiment of the present invention,
19 network traffic probe 920 selectively diverts incoming network traffic to ARB scanner 930.”). In
20 addition, Figure 1 of the ‘305 Patent shows a simplified diagram of the invention. ‘305 Patent, Fig. 1;
21 *see also id.*, Col. 5, ll. 40-43 (“Reference is now made to FIG. 1, which is a simplified block diagram
22 of an overall gateway security system that uses an adaptive rule-based (ARB) content scanner, in
23 accordance with a preferred embodiment of the present invention.”). In my opinion, pre-scanner 150 is
24 a network traffic probe because it selectively diverts content from the Internet to either the rule-based
25 content scanner 130 or to its intended destination of the client 120 on the corporate intranet. ‘305
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Patent, Fig. 1; *id.*, Col. 8, ll. 5-28. Thus, in my opinion, a person of ordinary skill in the art would understand that the network traffic probe is used to divert content to a rule-based content scanner.

52. Figure 9 is reproduced below:

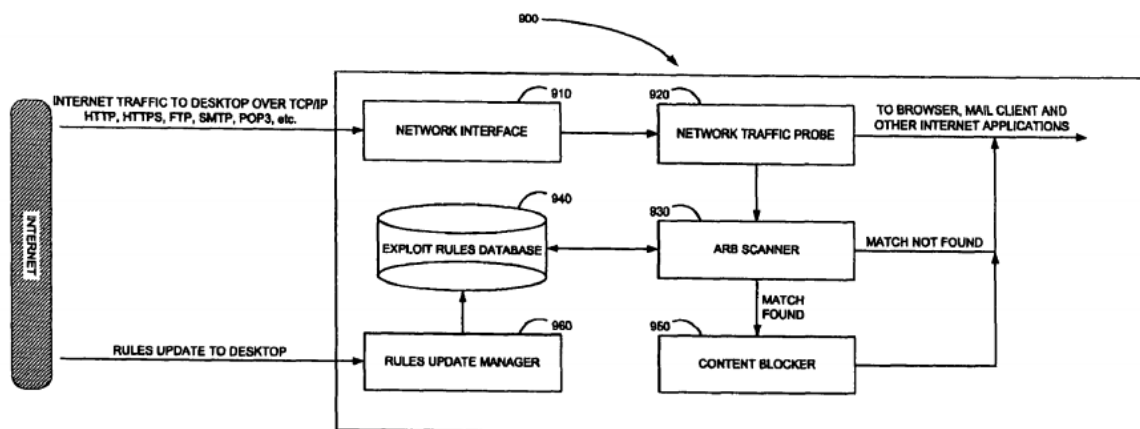


FIG. 9

53. Figure 1 is reproduced below:

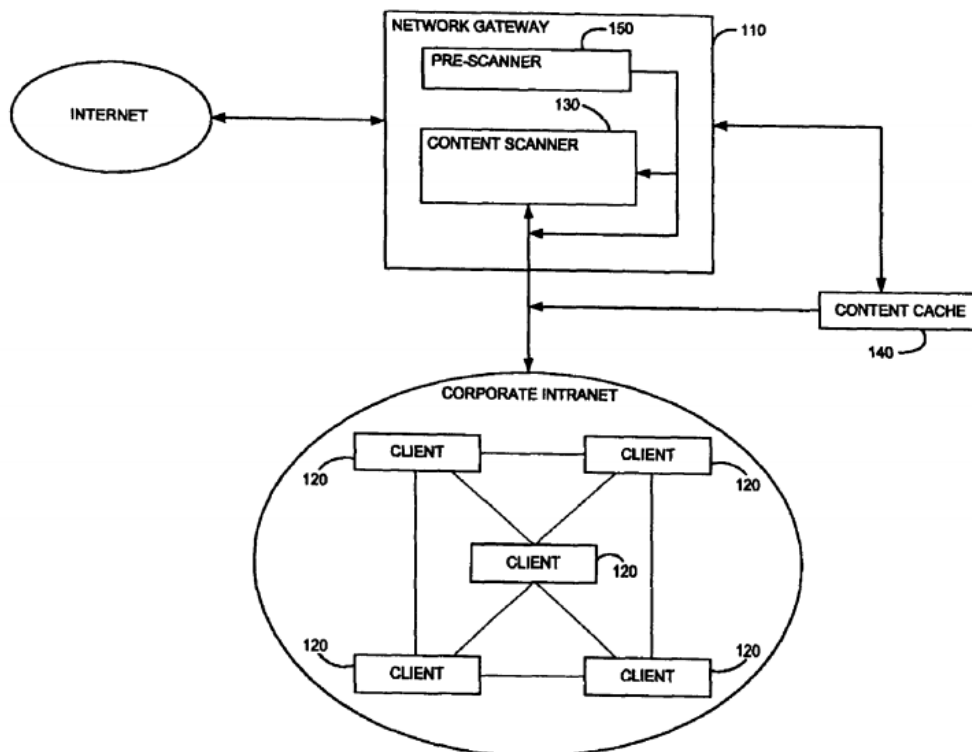


FIG. 1

54. In addition, the specification provides examples of why selective diverting of content is necessary. For example, the specification explains that a rule-based content scanner processes content at a slower rate (due to the “intensive processing”) than the rate of the incoming content, thus creating a bottleneck and essentially causing the network to operate as slow as the rule-based content scanner. *See e.g.*, ‘305 Patent, Col. 8, ll. 5-28. The solution to this problem is to selectively divert content to the rule-based content scanner. *Id.* One method explained in the ‘305 Patent is to use a pre-scanner to divert traffic coming in to the rule-based content scanner while still providing some security. *Id.* (“In order to accelerate the scanning process, pre-scanner 150 acts as a first-pass filter, to filter content that can be quickly recognized as innocuous. Content that is screened by pre-scanner 150 as being potentially malicious is passed along to ARB scanner 130 for further diagnosis. Content that is screened by pre-scanner 150 as being innocuous bypasses ARB scanner 130. It is expected that pre-scanner 150 filters 90% of incoming content, and that only 10% of the content requires extensive scanning by ARB scanner 130. As such, the combined effect of ARB scanner 130 and pre-scanner 150 provides an average scanning throughout of approximately 9 mega-bits per second.”). Thus the pre-scanner would divert only 10% of traffic that has been flagged as potentially malicious. A person of ordinary skill in the art would understand that there can be other methods of selectively diverting content from the rule-based content scanner, including by looking at the network load, size of the content, or the wait time for scanning content.

55. In my review of the prosecution history of the ‘305 Patent, there is nothing I can identify where the patent examiner did not understand what the term “selectively diverting incoming content from its intended destination to said rule-based content scanner” meant.

56. Thus, in my opinion, a person of ordinary skill in the art would understand with reasonable certainty what the term “selectively diverting incoming content from its intended

1 destination to said rule-based content scanner” means from reading the specification, the prosecution
2 history, and Claim 1.

3
4 I declare under penalty of perjury under the laws of the United States that the foregoing is true
5 and correct. Executed on May 1, 2015 in Los Angeles, California.
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Nenad Medvidović
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